SCS ENGINEERS







Session 7

Solid Waste Management Study 2018 and Beyond

November 19, 2008

HAMPTON ROADS PLANNING DISTRICT COMMISSION

SCS Scope

- Task 1 - Review Existing Regional Solid Waste System
- Task 2 - Evaluate Future Technology and Facility Needs
- Task 3 - Evaluate Institutional Models for Solid Waste Management
- Task 4 - Facilitation with Chief Administrative Officers
- Task 5 - Prepare Report and Recommendations

Evaluation Factors

- Technology status and reliability
- Institutional status and reliability
- System reliability
- System flexibility
- Funding approach
- Ease of implementation
- Financial metrics

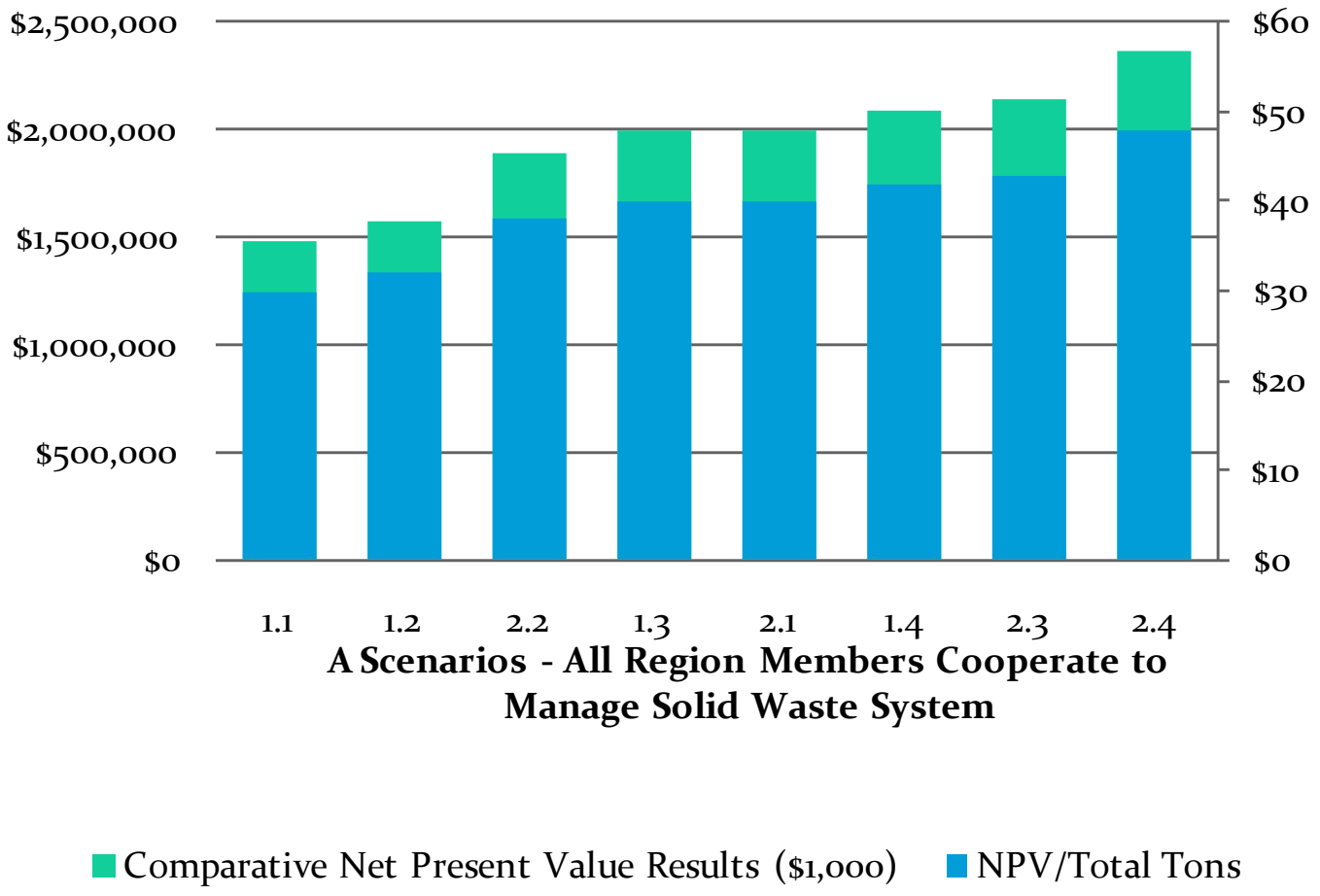
Assumed 2018 Conditions

- Current system debt retired
- In Region disposal capacity
- Out-of-region disposal capacity
- Transfer station network
- Waste-to-energy
- C&DD disposal capacity
- Solid waste quantities
- Feasible technologies
- Recycling

Pro Forma Evaluation

- Evaluated various cooperative scenarios
- Disposal
  - New regional landfill
  - Out-of-Region disposal
- WTE
  - Maintain existing RDF WTE Facility
  - Expand with mass burn WTE Facility
  - Abandon existing RDF WTE Facility

Comparitive Analysis
2008 Dollars



Pro Forma Results

- Siting a new Regional Landfill a significant factor to control costs – provided lowest NPV costs
- Regional landfill only scenario (without WTE) lowest cost NPV
- Transport and disposal in out-of-region landfill had highest NPV costs

Pro Forma Results

- If contract out for disposal, operating the WTE facility reduces NPV costs compared to eliminating WTE
- Operating system with existing WTE facility generally 5 to 8 percent higher costs (assuming Regional Landfill), but allows for significant volume reduction and energy recovery

Pro Forma Results

- Expanding WTE capacity resulted in the highest NPV costs
- Cooperating appears to provide long-term value, although in the early years some savings could be realized by individual member communities
- Host fees could provide substantial benefit to community hosting landfill and WTE facility

Pro Forma Results

- City of Virginia Beach has most flexibility with respect to disposal options and ability to control costs, at least in the short-term and possibly long-term depending on fate of permitting efforts at Landfill No. 2

Cooperation - Pros

- Various systems already in place
- More efficient development of facilities
- Current shortcomings are resolvable
- Some joint responsibilities after 2018
- Cost efficiencies, especially relating to siting a new regional landfill
- Economies of scale
- Leveraged purchasing
- Solid waste planning
- Achievement of recycling goals

Cooperation - Cons

- Loss of autonomy and control
- Reduced flexibility to respond to changes in market conditions
- Increased organizational and governance complexity
- Interplay of regional politics in implementation of Authority's mission

Institutional Recommendations

- Scope and function dependent on decision regarding ownership and operation of a regional landfill and the RDF WTE Facility and Mission of the organization
- Proportional representation
- Board membership qualifications
- Debt management
- System funding approach

Landfill

- New Regional Landfill should be sited
- Siting approaches
  - Region performs siting studies, purchases land, permits, and develops site
  - RFP process for privates to site, permit, and then sell back to Region, with provision for life-of-site operations contract
- Schedule tight

Waste-to-Energy

- RDF WTE Facility a valuable asset to the community
  - Volume reduction
  - Energy recovery
  - Hedge against increased transportation costs
- Can be maintained and upgraded to serve Region during planning period
- Facility extenstion study recommended

Role of Privates

- Collection
- Recycling
- Transportation
- Municipal solid waste and construction, demolition and debris disposal

Private Sector Contracting

- Advantages
  - Defined service levels and costs
  - Competitive bidding assures best pricing
  - Reduced number government employees, equipment, and overhead
  - Perceived more businesslike approach
  - Optimal location of facilities
  - Less political interference
  - More responsive to market changes

Private Sector Contracting

- Disadvantages
  - Perceived loss of control by public
  - Some argue more costly because of profit and taxes included in contracts
  - Not as responsive to changes in community needs
  - Higher potential for litigation to resolve issues

Other Factors Considered

- Conversion technologies
- Yard waste
- Recycling
- Rail haul
- Transfer station network
- Regional disposal asset ownership

System Funding

- Several options evaluated
- Current tip fee model works at cross purposes with goal of resource conservation and recovery
- Consider a waste generation fee approach
- Further study needed to assess feasibility of implementing throughout Region

Recommendations and Next Steps

- Review findings of study
- Present study to City and County Councils and Supervisors, respectively

Recommendations and Next Steps

- Develop consensus on mission and goals for the Region
- Make decision on Regional cooperation and revise governance, policies, board member qualifications, and policies for debt management
- Evaluate alternative funding approach

Recommendations and Next Steps

- Maintain key assets
- Proceed with siting a new Regional Landfill and study of expansion at current landfill
- Resolve sale of RDF WTE
  - If maintain ownership, conduct life extension study
  - If sell, revisit pro forma analysis, conclusions and recommendations

HRPDC Staff & Committee Recommended Actions

- Accept the report
- Refer report to participating localities and SPSA for consideration
- Request comments by Jan. 20, 2009
- Await finalization of SPSA negotiations on sale of RDF WTE Facility